

Amendments to the Specification

IN THE WRITTEN DESCRIPTION

Please replace paragraphs [0007] and [0008] with the following amended paragraphs:

[0007] Figure 2 shows the infrared reflection spectrum of the sulfated tin oxide catalyst MO-817.

BEST MODE FOR CARRYING OUT THE INVENTION

| ~~{Support}~~ Support

[0008] The support comprises a crystalline tin oxide, preferably metastannic acid. The support may be either powdered or shaped, or may consist of a tin oxide formed on the surface of a support consisting of a component other than tin oxide. Any form of tin oxide can be used as long as it is crystalline rather than amorphous, and stannous oxide or stannic oxide can be used, but metastannic acid is particularly desirable. Metastannic acid is produced by applying concentrated nitric acid to tin ore, and washing the result. It preferably consists of an oxide having an effectively tetragonal crystal structure. This can be confirmed by powder x-ray diffraction, and specifically by the diffraction peak at  $2\theta = 26.6^\circ$  (CuK $\alpha$  radiation). The tin oxide may be a hydrated oxide.

| ~~{Contact with organic acid}~~ Contact with Organic Acid

Please replace paragraph [0010] with the following amended paragraph:

[0010] Contact with the organic acid ions normally takes place at a temperature of 10 to 80°C or preferably 15 to 40°C for 0.1 to 10 hours. The concentration of organic acid ions when used in solution is 1% by mass or more or preferably 3 to 50% by mass.

| ~~{Contact with sulfate group-containing compound}~~ Contact with Sulfate Group-Containing Compound

Please replace paragraphs [0012] and [0013] with the following amended paragraphs:

**[0012]** Contact with the sulfate group-containing compound normally takes place at 10 to 80°C, preferably 15 to 40°C for 0.1 to 10 hours. The concentration of the sulfate group-containing compound when used in solution is 10% by mass or more, preferably 20 to 98% by mass. After contact with the organic acid ions the tin oxide may be either dried or not dried before being brought into contact with the sulfate group-containing compound.

| {Calcining} Calcining

**[0013]** Calcining is performed in air or a nitrogen or other gas atmosphere, and is preferably performed in air. The calcining temperature differs depending on the calcining time, gas flow rate and other calcining conditions but is normally 300° to 900°C, preferably 400° to 800°C. The calcining time differs depending on the gas flow rate and other calcining conditions but is normally 0.05 to 20 hours, preferably 0.1 to 10 hours, more preferably 0.2 to 5 hours. Calcining may be preceded by drying at 50 to 200°C.

| {Solid acid catalyst} Solid Acid Catalyst

Please replace paragraph [0016] with the following amended paragraph:

**[0016]** A desirable property of the solid acid is a Hammett acidity function  $H_0$  of -14 or less, preferably -16 or less. The argon adsorption heat is preferably -20 kJ/mol or less, more preferably -30 kJ/mol or less, still more preferably -30 to -60 kJ/mol. This argon adsorption heat is the adsorption amount measured by means of a volumetrical method when argon is introduced at the temperature of liquid nitrogen after the object being measured has been heated to 300°C while being exhausted in vacuum, as disclosed in detail in *J. Phys. Chem. B*, Vol. 105, No. 40, p. 9667 (2001). The solid acid catalyst

of the present invention is also characterized in that reflectance at 1280 cm<sup>-1</sup> is less than reflectance at 1220 cm<sup>-1</sup> in the infrared reflection spectrum. The solid acid catalyst of the present invention is also characterized by being white and specifically by having a reflectance at 450 nm of 80% or more in the ultraviolet reflection spectrum.

| ~~{Acid-catalytic reactions}~~ Acid-Catalytic Reactions

Please replace paragraph [0018] with the following amended paragraph:

**[0018]** It can be used in acid-catalytic reactions in which Lewis acid catalysts, typically aluminum chloride based catalysts, and Brønsted acid catalysts, typically sulfuric acid, are conventionally used. Examples of such reactions include isomerization, disproportionation, nitration, decomposition, alkylation, esterification, transesterification, acylation, etherification, polymerization and the like. In particular, the solid acid catalyst of the present invention is used favorably in transesterification, esterification and etherification reactions.

| ~~{Transesterification reaction}~~ Transesterification Reaction

Please replace paragraph [0020] with the following amended paragraph:

**[0020]** The raw material ester may have an ester compound as a principal component, or may be a polyhydric ester. In particular, a glyceride of a saturated or unsaturated fatty carboxylic acid having about 8 to 24 carbon atoms can be used by preference. Specifically, triglycerides which are known as fats and oils can be used by preference. Examples of such fats and oils include soy bean oil, coconut oil, olive oil, peanut oil, cottonseed oil, sesame seed oil, palm oil, castor oil and other vegetable oils as well as beef fat, pork fat, horse fat, whale oil, sardine oil, shark oil and other animal fats and oils. The raw material ester may contain 0 to 30% by weight or especially 1% to 20% by weight of free fatty acids.

An alcohol with 1 to 3 carbon atoms, particularly methanol or ethanol, can be used favorably as the alcohol in the transesterification reaction, but a polyhydric alcohol is also acceptable.

~~{Esterification reaction}~~Esterification Reaction

Please replace paragraph [0023] with the following amended paragraph:

**[0023]** The present invention is explained in detail below using examples.

~~{Preparation of sulfated tin oxide catalyst MO-858}~~Preparation of Sulfated Tin Oxide Catalyst MO-858

Please replace paragraph [0026] with the following amended paragraph:

**[0026]** In the infrared reflection spectrum, reflectance was 52.8% at 1280  $\text{cm}^{-1}$  and 52.2% at 1220  $\text{cm}^{-1}$ . In these specifications, the infrared reflection spectrum was obtained by mixing the sulfated tin oxide catalyst and KBr under stirring, compression molding the mixture into pellets, and measuring the surface reflection of the pellets by the diffuse reflection method. The measurement results are shown in Figure 1. In the ultraviolet reflection spectrum, reflectance at 450 nm was about 65%. In these specifications, the ultraviolet reflection spectrum was measured by measuring reflection from the surface of a sulfated tin oxide catalyst sample which had been powdered and compression molded.

~~{Preparation of sulfated tin oxide MO-817}~~Preparation of Sulfated Tin Oxide MO-817

Please replace paragraph [0030] with the following amended paragraph:

**[0030]** 4  $\text{cm}^3$  of each of these catalysts was packed into a fixed-bed flow reactor with a length in the vertical direction of 50 cm and an inside diameter of 1 cm, soy bean oil (produced by Kanto Chemical) as the raw material ester and

methanol as the alcohol were introduced from the upper end, and the conversion rate of soy bean oil at the lower outlet was measured by gas chromatography 4 and 20 hours after the start of the feed. The molar ratio of soy bean oil to methanol was 1:40. The results are shown in Table 1.

Table 1

Experimental example	1	2
Experimental number	28-7	5-7
Catalyst	MO-858	MO-817
Reaction temperature (°C)	200	200
WHSV (1/hour)	1.85	1.85
Raw material flow rate (g/hour)		
Soy bean oil	3.0	3.0
Methanol	4.4	4.4
Soy bean oil conversion rate (%)		
After 4 hours	16.0	69.0
After 20 hours	12.0	67.0

| ~~Esterification reaction~~ Esterification Reaction